REMARKS

Claims 4-16 are all the claims pending in the application.

Claim Objections

Claims 4 and 16 are objected to because of informalities.

With respect to claim 4, the Examiner objects to the language "such as" on line 2. In response, Applicants have removed the "such as" language objected to by the Examiner.

With respect to claim 16, the Examiner asserts that the term "elongate" should be "elongated". However, line 1 of claim 16 already does recite "elongated", which is consistent with claim 8, from which it depends. Applicants believe the Examiner intended to refer to claim 15. Accordingly, Applicants have amended claim 15 to recite "elongated". Applicants have also amended claim 4, from which claim 15 depends, in a similar manner to claim 15.

In view of the above, the claim objections are believed to be overcome.

Claim Rejections - 35 U.S.C. § 112

Claims 15 and 16 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that there is no mention of the length of the elongated members in the original disclosure. Applicants respectfully traverse.

Fig. 1 discloses that the solar generators 12 and 14 are fixed lengths. Also, it is inherent from the disclosure and one of ordinary skill in the art would understand that the solar generators described in the present application are a fixed length. There is no description in Applicants' disclosure that the members are variable and the figures clearly represent fixed lengths.

Claim Rejections - 35 U.S.C. § 102

Claims 8, 10, 12 and 13 remain rejected under 35 U.S.C. § 102(b) as being anticipated by Heiberg (U.S. Patent No. 5,944,761). Claim 8 is an independent claim and claims 10, 12 and 13 depend from claim 8. Applicants respectfully traverse.

In the Amendment filed November 17, 2006, Applicants argued that the Examiner was improperly combining features from two different embodiments of Heiberg. Applicants also argued that the Examiner failed to support his assertion that the embodiment of Fig. 2 inherently teaches a corrector such that the bandwidth of the attitude regulation loop contains the lowest and most energetic frequencies of the flexible modes of the elongated members and that the graph of the frequency of the disturbance 116 (*see* Fig. 2 of Heiberg) contradicted the Examiner's assertion. In response, the Examiner now asserts that the first embodiment of Heiberg alone (*i.e.*, the embodiment of Fig. 1) reads on the claimed invention (*see* section 17 on pages 5 and 6 of the Office Action). Particularly, the Examiner asserts that it is **inherent** that the attitude regulation loop of the embodiment of Heiberg Fig. 1 include the lowest and most energetic frequencies of the solar panels. The Examiner also appears to reason that it is similarly **inherent** that the embodiment of Heiberg Fig. 2 includes this feature. However, Applicants respectfully submit that neither of the embodiments disclosed in Heiberg disclose an attitude regulation loop which contains the lowest and most energetic frequencies of the flexible modes of the elongated members, as claimed.

Initially, there is no indication that Heiberg teaches an attitude regulation loop which includes the lowest and most energetic frequencies. Particularly, neither the embodiment of Fig.

1 (with disturbance $w_{(s)}$) nor the embodiment of Fig. 2 (with disturbance frequency ω_d) teach a loop with the lowest and most energetic frequencies. In fact, the entire Heiberg does not teach anything regarding the bandwidth of a loop containing the lowest and most energetic frequencies of the flexible modes. Instead, Heiberg is concerned only with dealing with vibrations which change frequency with time. This is contrary to Applicants claimed invention for correcting the lowest and most energetic frequencies, which are absolute and do not vary with time.

Furthermore, it is not inherent that Heiberg teach an attitude regulation loop having a bandwidth containing the lowest and most energetic frequencies. The doctrine of inherency allows for "modest flexibility in the rule that 'anticipation' requires that every element of the claims appear in a single reference." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991). "It is not, however, a substitute for determination of patentability in terms of § 103." *Id.* Although extrinsic evidence may be consulted regarding an asserted inherent characteristic, "[s]uch evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Id.* at 1268 (emphasis added). Moreover, inherency "may not be established by probabilities or possibilities." *Id.* at 1269. "The mere fact that a certain thing may result from a given set of circumstances is not sufficient," and expert testimony cannot be used to fill in the evidentiary gaps of an otherwise lacking prior art reference. *Motorola Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461, 1473 (Fed. Cir. 1997), citing *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554 (Fed. Cir. 1983) (reversing trial court's judgment of invalidity

because expert's testimony of inherent anticipation, unsupported by the evidentiary record, cannot serve as a basis for a finding of anticipation).

If a structure in a cited reference does not expressly disclose a claimed feature, but absolutely must include that claimed feature in order to function properly, then that feature is deemed to be inherently disclosed. *See, e.g., W.L. Gore*, 721 F.2d at 1554 ("[W]e are not persuaded that the "effect" of the processes disclosed in Smith and Sumitomo, an "effect" undisclosed in those patents, would be *always* to inherently produce or be seen always to produce products meeting all of the claim limitations.") In other words, if there are two or more possibilities with respect to the non-disclosed feature, then the non-disclosed feature is not inherent.

As discussed above, if there are two or more possibilities with respect to the non-disclosed feature, then the non-disclosed feature is not inherent. In this case there are clearly two or more possibilities. Particularly, the Heiberg bandwidth may not contain the lowest and most energetic frequencies. In fact, as argued in the previous Amendment, the graph of the frequency of the disturbance 116 (*see* Fig. 2 of Heiberg) contradict the assertion that Heiberg would have the lowest and most energetic frequencies. Only the present application teaches that the loop should include the lowest and most energetic frequencies and only the present application teaches that this would be beneficial. In contrast, Heiberg is concerned only with dealing with vibrations which change frequency with time, not correcting the lowest and most energetic frequencies, which are absolute and do not vary with time. Therefore, it does not anticipate the claimed invention.

In view of the above, applicants respectfully submit that claims 8, 10, 12 and 13 are allowable over Heiberg.

Claim Rejections - 35 U.S.C. § 103

Claims 4, 6 and 14-16

Claims 4, 6 and 14-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Heiberg. Claim 4 is allowable at least for reasons similar to claim 8. Also, claims 6 and 15 depend from claim 4 and claims 14 and 16 depend from independent claim 8. Accordingly, claims 6 and 14-16 are allowable at least by virtue of their respective dependencies.

Claims 5, 7, 9 and 11

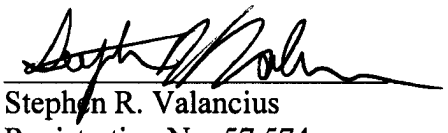
Claims 5, 7, 9 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Heiberg in view of Parvez et al. (U.S. Patent No. 6,089,507). Claims 5 and 7 depend from claim 4 and claims 9 and 11 depend from claim 8. Claims 5, 7, 9 and 11 are allowable at least by virtue of their respective dependencies.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Stephen R. Valancius
Registration No. 57,574

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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